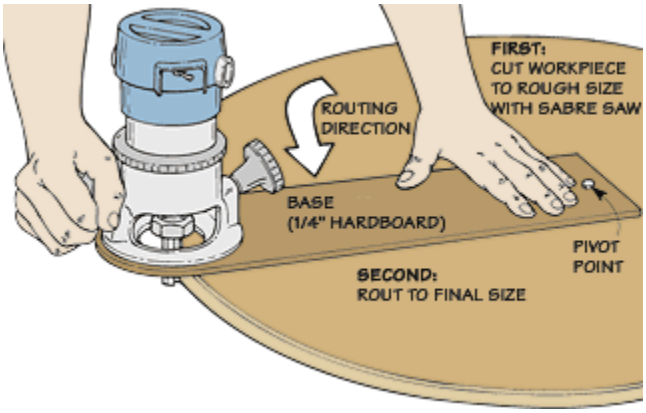
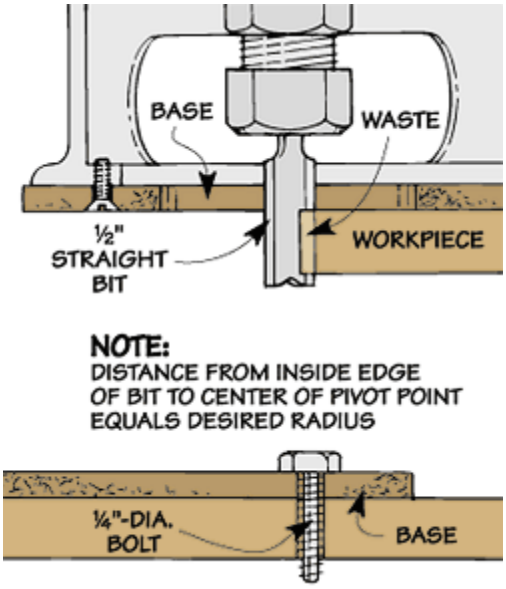
Router Circle Cutting Jig for Woodworking



Recently, I was working on a project that called for cutting a large circular workpiece. The material that I was using was medium density fiberboard (MDF), and I needed a quick and easy circle cutting tool so that I would had a nice smooth edge.

I've found that the best way to do this job is to use a router that's mounted to a trammel, see the drawing at right.

The trammel is nothing more than a base made from 1/4" hardboard that pivots on a bolt. The bolt fits into a hole drilled in the center of the workpiece. Note: The hole doesn't need to be drilled all the way through the piece. To size the base, I ripped it to width so it was wide enough to support my router. Then I cut it about 9" longer than the radius of the circle to be cut.



The next step is to locate the pivot hole in the base. After mounting the router to the base and installing a straight bit, simply measure from the inside edge of the bit and drill a hole centered at a distance that matches the radius, see the drawings at left.

Before routing the circle, it's a good idea to first cut the workpiece to rough shape. (I used my sabre saw to do this.) This way, there's not as much material to remove as you rout it to final size. Also, make sure to rout in a counterclockwise direction. This means you're routing the opposite direction as the rotation of the bit. This is safer because the bit pulls the router into the workpiece so it doesn't "bounce" along the edge.